

FIGURE 1A

CyPat - PSoC Designer - [Device Edition]

File Edit View Project Config Build Debug Program Tools Window Help

Project: P1216_1

Users Modules selected for placement:

- ADCS
- Channals
- DACs
- Amplifiers
- PWME

121

123

CYPRUS MICROSYSTEMS

16-Bit Pulse Width Modulator

PWM16 Revision 11

Resources	Required	Optional
PSoC™ Blocks	2 Digital, 0 Analog	SRAM in Default Interrupt Routine
Memory	66 bytes FLASH, 0 bytes SRAM	1 per External I/O
Pins		

124

122

Serial User Modules

Triggers

FIGURE 1B

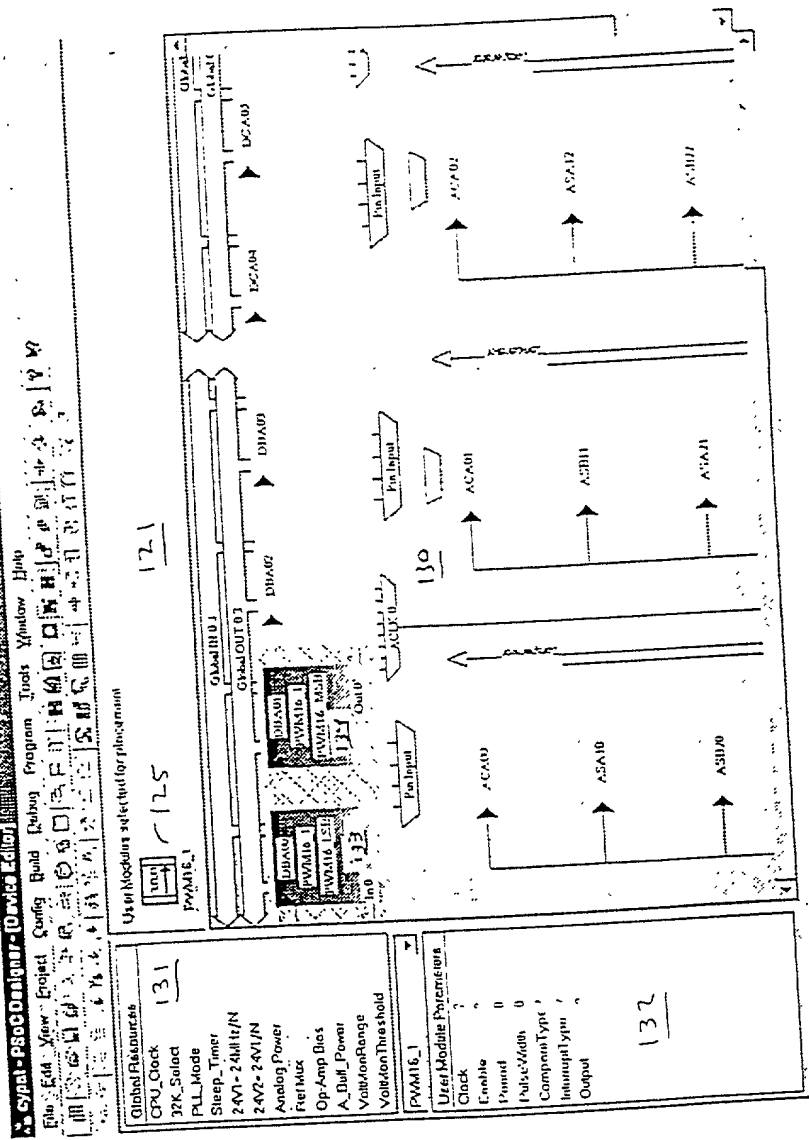


FIGURE 1C

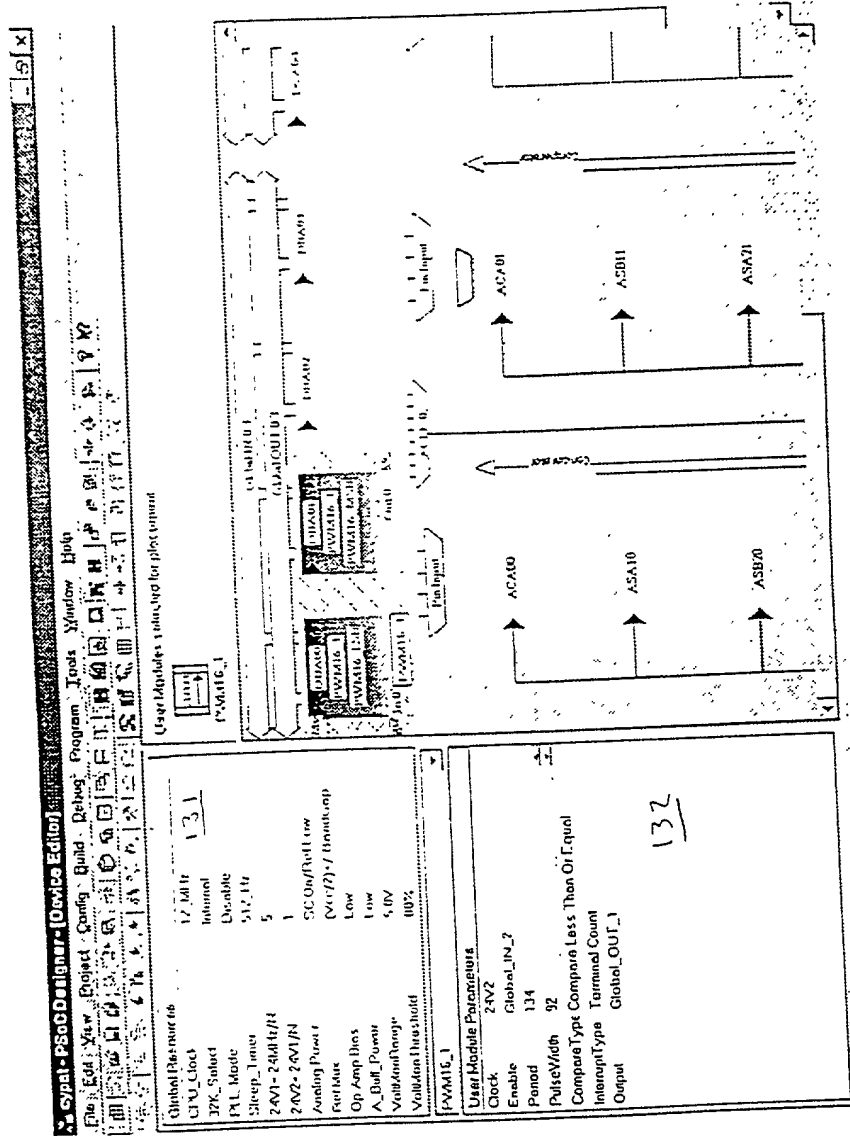


FIGURE 1D

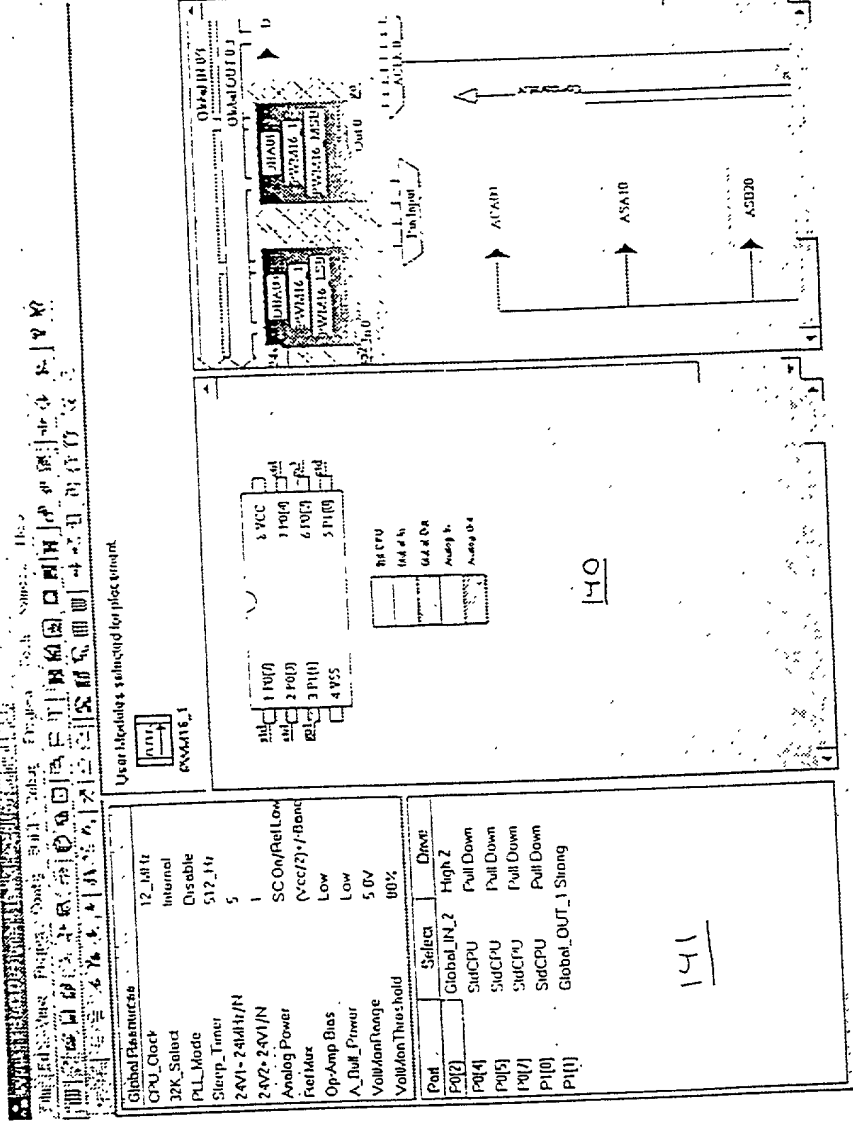


FIGURE 1E

200004650

200

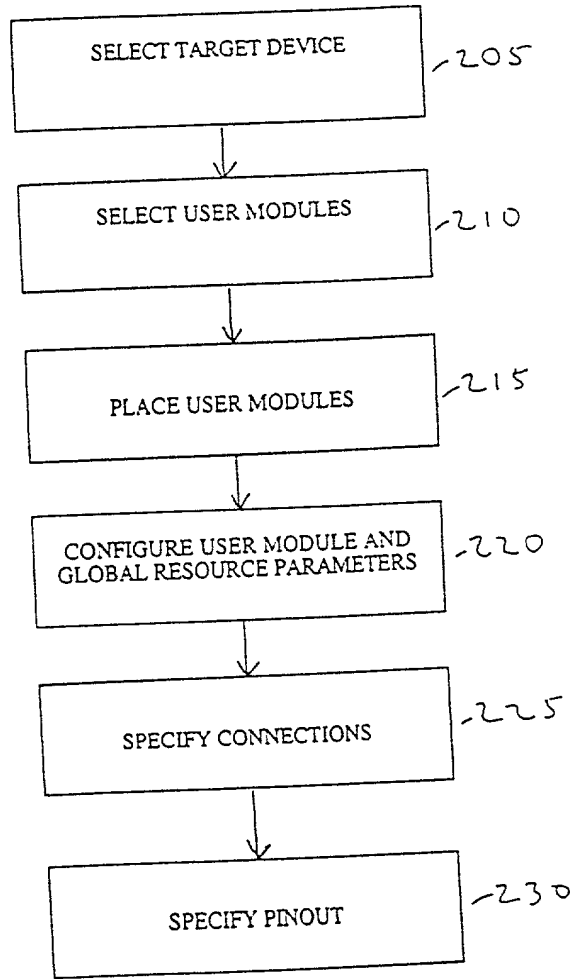


FIGURE 2A

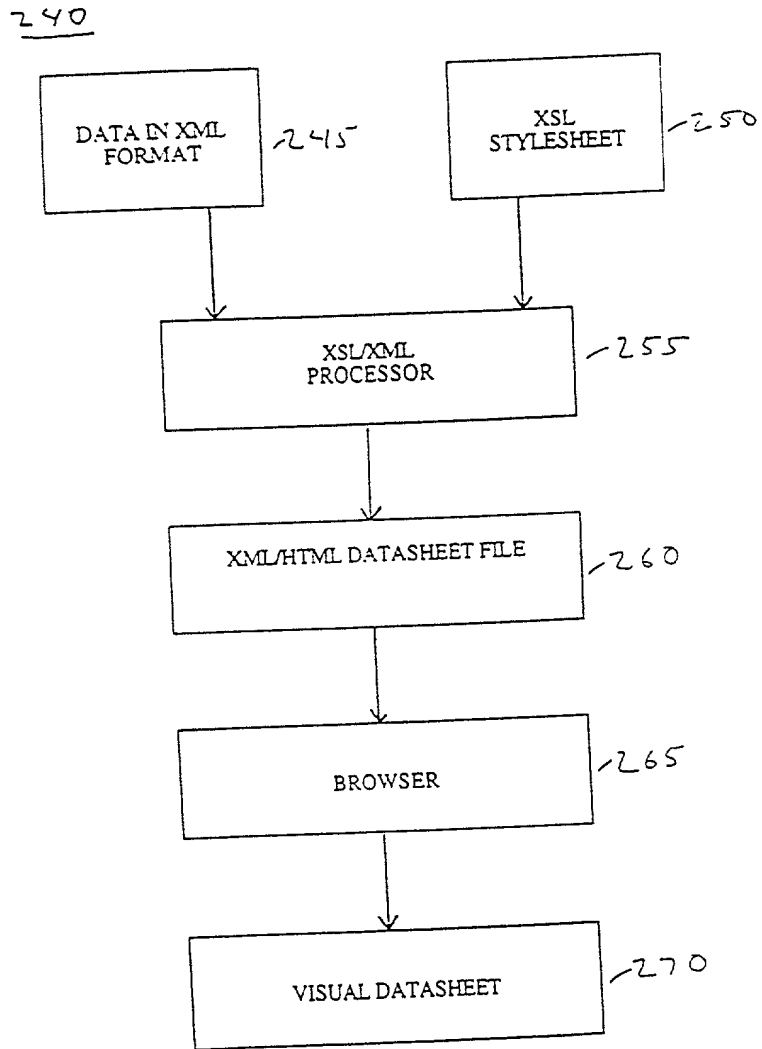


FIGURE 2B

```

<PSOC_DEVICE_DB>
  <PSOC_CONFIG_LIST>
    <PSOC_CONFIG NAME="parent:Spin2" BASE_DEVICE="CY8C25122-24PI"
SOURCE_GEN_TIME="1004727340" CONFIG_SAVE_TIME="1004727340"
CONFIG_SAVE_DATE="Fri Nov 02 10:55:40 2001
" VERSION="2.0">
      <USER_MODULE_LIST> 31
        <USER_MODULE NAME="PWM16"
INSTANCE_NAME="PulseGenerator" VERSION="">
          <SHAPE SHAPE_TYPE="BLOCKLIST"
COLOR_INDEX="0">
            <BLOCK_LIST>
              <BLOCK NAME="PWM16_LSB"
TYPE="DIGITAL" LOCATION="0">
                <REGISTER_LIST>
                  <REGISTER
NAME="CONTROL_0" ADDR="23" VALUE="0"/>
                  <REGISTER
NAME="DATA_0" ADDR="20" VALUE="0"/>
                  <REGISTER
NAME="DATA_1" ADDR="21" VALUE="86"/>
                  <REGISTER
NAME="DATA_2" ADDR="22" VALUE="5c"/>
                  <REGISTER
NAME="DIG_BasicFunction" ADDR="120" VALUE="1"/>
                  <REGISTER
NAME="DIG_Input" ADDR="121" VALUE="e6"/>
                  <REGISTER
NAME="DIG_Output" ADDR="122" VALUE="0"/>
                </REGISTER_LIST>
                <INPUT_LIST/>
              </BLOCK>
              <BLOCK NAME="PWM16_MSB"
TYPE="DIGITAL" LOCATION="1">
                <REGISTER_LIST>
                  <REGISTER
NAME="CONTROL_0" ADDR="27" VALUE="0"/>
                  <REGISTER
NAME="DATA_0" ADDR="24" VALUE="0"/>
                  <REGISTER
NAME="DATA_1" ADDR="25" VALUE="0"/>
                  <REGISTER
NAME="DATA_2" ADDR="26" VALUE="0"/>
                  <REGISTER
NAME="DIG_BasicFunction" ADDR="124" VALUE="21"/>
                  <REGISTER
NAME="DIG_Input" ADDR="125" VALUE="36"/>
                  <REGISTER
NAME="DIG_Output" ADDR="126" VALUE="5"/>
                </REGISTER_LIST>
                <INPUT_LIST/>
            </BLOCK_LIST>
          </SHAPE SHAPE_TYPE="BLOCKLIST"
COLOR_INDEX="0">
        </USER_MODULE NAME="PWM16"
INSTANCE_NAME="PulseGenerator" VERSION="">
      </USER_MODULE_LIST>
    </PSOC_CONFIG NAME="parent:Spin2" BASE_DEVICE="CY8C25122-24PI"
SOURCE_GEN_TIME="1004727340" CONFIG_SAVE_TIME="1004727340"
CONFIG_SAVE_DATE="Fri Nov 02 10:55:40 2001
" VERSION="2.0">
  </PSOC_CONFIG_LIST>
</PSOC_DEVICE_DB>

```

FIGURE 3A

2022.0" 00976560


```

        </BLOCK>
    </BLOCK_LIST>
    </RESOURCE_LIST>
</SHAPE>
<PARAMETER_LIST>
    <PARAMETER NAME="Clock" VALUE="24V2"/>
    <PARAMETER NAME="CompareType"
VALUE="Compare Less Than Or Equal"/>
    <PARAMETER NAME="Enable"
VALUE="Global_IN_2"/>
    <PARAMETER NAME="InterruptType"
VALUE="Terminal Count"/>
    <PARAMETER NAME="Output"
VALUE="Global_OUT_1"/>
    <PARAMETER NAME="Period" VALUE="134"/>
    <PARAMETER NAME="PulseWidth"
VALUE="92"/>
</PARAMETER_LIST>
</USER_MODULE>
</USER_MODULE_LIST>
<DEVICE_DATA>
    <GLOBAL_RESOURCE_LIST>
        <RESOURCE NAME="24V1= 24MHz/N" VALUE="5"/>
        <RESOURCE NAME="24V2= 24V1/N" VALUE="1"/>
        <RESOURCE NAME="32K_Select" VALUE="Internal"/>
        <RESOURCE NAME="A_Buff_Power" VALUE="Low"/>
        <RESOURCE NAME="Analog Power" VALUE="SC Or/Ref
Low"/>
        <RESOURCE NAME="CPU_Clock" VALUE="12_MHz"/>
        <RESOURCE NAME="Op-Amp Bias" VALUE="Low"/>
        <RESOURCE NAME="PLL_Mode" VALUE="Disable"/>
        <RESOURCE NAME="Ref Mux" VALUE="(Vcc/2)+/-
BandGap"/>
        <RESOURCE NAME="Sleep_Timer" VALUE="512_Hz"/>
        <RESOURCE NAME="SwitchModePump"
VALUE="OFF"/>
        <RESOURCE NAME="VoltMonRange" VALUE="5.0V"/>
        <RESOURCE NAME="VoltMonThreshold"
VALUE="80%"/>
    </GLOBAL_RESOURCE_LIST>
    <RESERVED_RESOURCE_LIST>
        <RESOURCE NAME="" VALUE="" TYPE=""/>
        <RESOURCE NAME="ASB11-ASA10" VALUE=""
TYPE="DIRECT_INPUT"/>
        <RESOURCE NAME="ASB13-ASA12" VALUE=""
TYPE="DIRECT_INPUT"/>
        <RESOURCE NAME="ASB20-ASA21" VALUE=""
TYPE="DIRECT_INPUT"/>
        <RESOURCE NAME="ASB22-ASA23" VALUE=""
TYPE="DIRECT_INPUT"/>
    </RESERVED_RESOURCE_LIST>
</DEVICE_DATA>
</USER_MODULE_LIST>
</USER_MODULE>
</SHAPE>
</PARAMETER_LIST>
</RESOURCE_LIST>
</BLOCK_LIST>
</BLOCK>

```

FIGURE 3B

```

<RESOURCE NAME="AnalogClock_0_Select" VALUE=""
TYPE="ANALOG_CLOCK_SELECT"/>
<RESOURCE NAME="AnalogClock_1_Select" VALUE=""
TYPE="ANALOG_CLOCK_SELECT"/>
<RESOURCE NAME="AnalogColumn_Clock_0"
VALUE="24V1" TYPE="ANALOG_COLUMN_CLOCK_MUX"/>
<RESOURCE NAME="AnalogColumn_Clock_1"
VALUE="24V1" TYPE="ANALOG_COLUMN_CLOCK_MUX"/>
<RESOURCE NAME="AnalogColumn_Clock_2"
VALUE="24V1" TYPE="ANALOG_COLUMN_CLOCK_MUX"/>
<RESOURCE NAME="AnalogColumn_Clock_3"
VALUE="24V1" TYPE="ANALOG_COLUMN_CLOCK_MUX"/>
<RESOURCE NAME="AnalogColumn_InputMUX_0"
VALUE="Port_0_1" TYPE="COLUMN_INPUT"/>
<RESOURCE NAME="AnalogColumn_InputMUX_1"
VALUE="Port_0_4" TYPE="COLUMN_INPUT"/>
<RESOURCE NAME="AnalogColumn_InputMUX_2"
VALUE="Port_0_5" TYPE="COLUMN_INPUT"/>
<RESOURCE NAME="AnalogColumn_InputMUX_3"
VALUE="Port_0_0" TYPE="COLUMN_INPUT"/>
<RESOURCE NAME="AnalogColumn_InputSelect_1"
VALUE="AnalogColumn_InputMUX_1" TYPE="COLUMN_INPUT_SELECT"/>
<RESOURCE NAME="AnalogColumn_InputSelect_2"
VALUE="AnalogColumn_InputMUX_2" TYPE="COLUMN_INPUT_SELECT"/>
<RESOURCE NAME="AnalogComparatorControl_0"
VALUE="" TYPE="ANALOG_COMPARATOR_CONTROL"/>
<RESOURCE NAME="AnalogComparatorControl_1"
VALUE="" TYPE="ANALOG_COMPARATOR_CONTROL"/>
<RESOURCE NAME="AnalogComparatorControl_2"
VALUE="" TYPE="ANALOG_COMPARATOR_CONTROL"/>
<RESOURCE NAME="AnalogComparatorControl_3"
VALUE="" TYPE="ANALOG_COMPARATOR_CONTROL"/>
<RESOURCE NAME="AnalogModulator_Col_0"
VALUE="None" TYPE="ANALOG_MODULATOR"/>
<RESOURCE NAME="AnalogModulator_Col_2"
VALUE="None" TYPE="ANALOG_MODULATOR"/>
<RESOURCE NAME="AnalogOutBuf_0" VALUE="OFF"
TYPE="ANALOG_DRIVER"/>
<RESOURCE NAME="AnalogOutBuf_1" VALUE="OFF"
TYPE="ANALOG_DRIVER"/>
<RESOURCE NAME="AnalogOutBuf_2" VALUE="OFF"
TYPE="ANALOG_DRIVER"/>
<RESOURCE NAME="AnalogOutBuf_3" VALUE="OFF"
TYPE="ANALOG_DRIVER"/>
<RESOURCE NAME="AnalogOutBus_0" VALUE=""
TYPE="ANALOG_COLUMN_OUTPUT"/>
<RESOURCE NAME="AnalogOutBus_1" VALUE=""
TYPE="ANALOG_COLUMN_OUTPUT"/>
<RESOURCE NAME="AnalogOutBus_2" VALUE=""
TYPE="ANALOG_COLUMN_OUTPUT"/>

```

FIGURE 3C

```

                        <RESOURCE NAME="AnalogOutBus_3" VALUE=""
TYPE="ANALOG_COLUMN_OUTPUT"/>
                        <RESOURCE NAME="ComparatorBus_0" VALUE=""
TYPE="ANALOG_COMPARATOR_OUTPUT"/>
                        <RESOURCE NAME="ComparatorBus_1" VALUE=""
TYPE="ANALOG_COMPARATOR_OUTPUT"/>
                        <RESOURCE NAME="ComparatorBus_2" VALUE=""
TYPE="ANALOG_COMPARATOR_OUTPUT"/>
                        <RESOURCE NAME="ComparatorBus_3" VALUE=""
TYPE="ANALOG_COMPARATOR_OUTPUT"/>
                        <RESOURCE NAME="ComparatorClock" VALUE=""
TYPE="COMPARATOR_CLOCK"/>
                        <RESOURCE NAME="ComparatorGate_0" VALUE=""
TYPE="COMPARATOR_ENABLE"/>
                        <RESOURCE NAME="ComparatorGate_1" VALUE=""
TYPE="COMPARATOR_ENABLE"/>
                        <RESOURCE NAME="ComparatorGate_2" VALUE=""
TYPE="COMPARATOR_ENABLE"/>
                        <RESOURCE NAME="ComparatorGate_3" VALUE=""
TYPE="COMPARATOR_ENABLE"/>
                        <RESOURCE NAME="DBA00-DBA01" VALUE=""
TYPE="DIRECT_INPUT"/>
                        <RESOURCE NAME="DBA01-DBA02" VALUE=""
TYPE="DIRECT_INPUT"/>
                        <RESOURCE NAME="DBA02-DBA03" VALUE=""
TYPE="DIRECT_INPUT"/>
                        <RESOURCE NAME="DBA03-DCA04" VALUE=""
TYPE="DIRECT_INPUT"/>
                        <RESOURCE NAME="DCA04-DCA05" VALUE=""
TYPE="DIRECT_INPUT"/>
                        <RESOURCE NAME="DCA05-DCA06" VALUE=""
TYPE="DIRECT_INPUT"/>
                        <RESOURCE NAME="DCA06-DCA07" VALUE=""
TYPE="DIRECT_INPUT"/>
                        <RESOURCE NAME="Decimator" VALUE=""
TYPE="DECIMATOR"/>
                        <RESOURCE NAME="Global_IN_0" VALUE=""
TYPE="GLOBAL_BUS"/>
                        <RESOURCE NAME="Global_IN_1" VALUE=""
TYPE="GLOBAL_BUS"/>
                        <RESOURCE NAME="Global_IN_2" VALUE=""
TYPE="GLOBAL_BUS"/>
                        <RESOURCE NAME="Global_IN_3" VALUE=""
TYPE="GLOBAL_BUS"/>
                        <RESOURCE NAME="Global_IN_4" VALUE=""
TYPE="GLOBAL_BUS"/>
                        <RESOURCE NAME="Global_IN_5" VALUE=""
TYPE="GLOBAL_BUS"/>
                        <RESOURCE NAME="Global_IN_6" VALUE=""
TYPE="GLOBAL_BUS"/>

```

FIGURE 3D

```

TYPE="GLOBAL_BUS"/>
TYPE="GLOBAL_BUS"/>
TYPE="GLOBAL_BUS"/>
TYPE="GLOBAL_BUS"/>
TYPE="GLOBAL_BUS"/>
TYPE="GLOBAL_BUS"/>
TYPE="GLOBAL_BUS"/>
TYPE="GLOBAL_BUS"/>
TYPE="GLOBAL_BUS"/>
TYPE="PN"/>
TYPE="PN"/>
TYPE="PN"/>
Down" TYPE="PN"/>
TYPE="PN"/>
Down" TYPE="PN"/>
TYPE="PN"/>
Down" TYPE="PN"/>
TYPE="PN"/>
Down" TYPE="PN"/>
(Strong)" TYPE="PN"/>
TYPE="PN"/>
TYPE="TEMPERATURE_VOLTAGE"/>
ADDR="161"/>
VALUE="0" ADDR="160"/>

<RESOURCE NAME="Global_IN_7" VALUE=""
<RESOURCE NAME="Global_OUT_0" VALUE=""
<RESOURCE NAME="Global_OUT_1" VALUE=""
<RESOURCE NAME="Global_OUT_2" VALUE=""
<RESOURCE NAME="Global_OUT_3" VALUE=""
<RESOURCE NAME="Global_OUT_4" VALUE=""
<RESOURCE NAME="Global_OUT_5" VALUE=""
<RESOURCE NAME="Global_OUT_6" VALUE=""
<RESOURCE NAME="Global_OUT_7" VALUE=""
<RESOURCE NAME="Port_0_2" VALUE="Global_IN_2"
<RESOURCE NAME="Port_0_2_Drive" VALUE="High Z"
<RESOURCE NAME="Port_0_4" VALUE="StdCPU"
<RESOURCE NAME="Port_0_4_Drive" VALUE="Pull
<RESOURCE NAME="Port_0_5" VALUE="StdCPU"
<RESOURCE NAME="Port_0_5_Drive" VALUE="Pull
<RESOURCE NAME="Port_0_7" VALUE="StdCPU"
<RESOURCE NAME="Port_0_7_Drive" VALUE="Pull
<RESOURCE NAME="Port_1_0" VALUE="StdCPU"
<RESOURCE NAME="Port_1_0_Drive" VALUE="Pull
<RESOURCE NAME="Port_1_1" VALUE="Global_OUT_1
<RESOURCE NAME="Port_1_1_Drive" VALUE="Strong"
<RESOURCE NAME="VT" VALUE=""
</RESERVED_RESOURCE_LIST>
<GLOBAL_REGISTER_LIST>
<REGISTER NAME="AnalogClockSelect" VALUE="0"
<REGISTER NAME="AnalogColumnClockSelect"

```

FIGURE 3E

```
VALUE="28" ADDR="60"/>
ADDR="162"/>
VALUE="0" ADDR="163"/>
ADDR="63"/>
ADDR="65"/>
ADDR="e6"/>
ADDR="1e1"/>
ADDR="2"/>
ADDR="100"/>
ADDR="101"/>
ADDR="6"/>
ADDR="104"/>
ADDR="105"/>
ADDR="a"/>
ADDR="108"/>
ADDR="109"/>
ADDR="e"/>
ADDR="10c"/>
ADDR="10d"/>
ADDR="12"/>
ADDR="110"/>
ADDR="111"/>
ADDR="16"/>
ADDR="114"/>
ADDR="115"/>
<REGISTER NAME="AnalogColumnInputSelect"
<REGISTER NAME="AnalogIOControl" VALUE="0"
<REGISTER NAME="AnalogModulatorControl"
<REGISTER NAME="AnalogReferenceControl" VALUE="5"
<REGISTER NAME="AnalogSyncControl" VALUE="0"
<REGISTER NAME="DecimatorControl" VALUE="0"
<REGISTER NAME="OscillatorControl_1" VALUE="40"
<REGISTER NAME="Port_0_Bypass" VALUE="4"
<REGISTER NAME="Port_0_DriveMode_0" VALUE="0"
<REGISTER NAME="Port_0_DriveMode_1" VALUE="4"
<REGISTER NAME="Port_1_Bypass" VALUE="2"
<REGISTER NAME="Port_1_DriveMode_0" VALUE="2"
<REGISTER NAME="Port_1_DriveMode_1" VALUE="0"
<REGISTER NAME="Port_2_Bypass" VALUE="0"
<REGISTER NAME="Port_2_DriveMode_0" VALUE="0"
<REGISTER NAME="Port_2_DriveMode_1" VALUE="0"
<REGISTER NAME="Port_3_Bypass" VALUE="0"
<REGISTER NAME="Port_3_DriveMode_0" VALUE="0"
<REGISTER NAME="Port_3_DriveMode_1" VALUE="0"
<REGISTER NAME="Port_4_Bypass" VALUE="0"
<REGISTER NAME="Port_4_DriveMode_0" VALUE="0"
<REGISTER NAME="Port_4_DriveMode_1" VALUE="0"
<REGISTER NAME="Port_5_Bypass" VALUE="0"
<REGISTER NAME="Port_5_DriveMode_0" VALUE="0"
<REGISTER NAME="Port_5_DriveMode_1" VALUE="0"
```

FIGURE 3F

00946660-012270

```
ADDR="1e3"/>
<REGISTER NAME="VoltageMonitorControl" VALUE="84"
</GLOBAL_REGISTER_LIST>
<PIN_DESC_LIST>
  <PIN_DESC PIN_NUMBER="1" PIN_LABEL="P0[7]"
    PIN_SELECT="StdCPU" PIN_DRIVE="Pull Down"/>
  <PIN_DESC PIN_NUMBER="2" PIN_LABEL="P0[5]"
    PIN_SELECT="StdCPU" PIN_DRIVE="Pull Down"/>
  <PIN_DESC PIN_NUMBER="3" PIN_LABEL="P1[1]"
    PIN_SELECT="Global_OUT_1 (Strong)" PIN_DRIVE="Strong"/>
  <PIN_DESC PIN_NUMBER="4" PIN_LABEL="VSS"
    PIN_SELECT="" PIN_DRIVE=""/>
  <PIN_DESC PIN_NUMBER="5" PIN_LABEL="P1[0]"
    PIN_SELECT="StdCPU" PIN_DRIVE="Pull Down"/>
  <PIN_DESC PIN_NUMBER="6" PIN_LABEL="P0[2]"
    PIN_SELECT="Global_IN_2" PIN_DRIVE="High Z"/>
  <PIN_DESC PIN_NUMBER="7" PIN_LABEL="P0[4]"
    PIN_SELECT="StdCPU" PIN_DRIVE="Pull Down"/>
  <PIN_DESC PIN_NUMBER="8" PIN_LABEL="VCC"
    PIN_SELECT="" PIN_DRIVE=""/>
</PIN_DESC_LIST>
</DEVICE_DATA>
<CONFIG_PREFERENCES>
  <SELECTED_USER_MODULE_LIST/>
</CONFIG_PREFERENCES>
</PSOC_CONFIG>
</PSOC_CONFIG_LIST>
</PSOC_DEVICE_DB>
```

32 }

FIGURE 3G

2022-009650

```
<?xml version="1.0"?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/TR/WD-xsl">
<xsl:template match="/">

<HTML><HEAD>
  <STYLE>
    DIV.page { page-break-before: always }
  </STYLE>
</HEAD>
<BODY>
<TABLE BORDER="1" CELLSPACING="0" WIDTH="640">
  <TR><TD>
    <TABLE BORDER="0" CELLSPACING="0">
      <TR><TD>
        <DIV STYLE="media=print;font-family:Tahoma,Arial,sans-
serif;
font-size:12pt; color:blue;
text-align:center; letter-spacing:6px;
font-weight:bold">
          PSoC Designer Configuration Sheet
        </DIV>
      </TD></TR>
      <TR>
        <TD><IMG SRC="cyp.jpg" ALIGN="LEFT"
WIDTH="350"/></TD>
      </TR>
    </TABLE>
  </TD><TD><TABLE BORDER="0" CELLSPACING="0">
    <xsl:for-each select="//PSOC_CONFIG_LIST/PSOC_CONFIG">
      <TR><TD>
        <DIV STYLE="media=print;font-family:Tahoma,Arial,sans-
serif;
font-size:10pt; color:black;
text-align:center; letter-spacing:6px;
font-weight:bold">
          <xsl:apply-templates select="@NAME"/>
        </DIV>
      </TD></TR>
      <TR>
        <TD><xsl:apply-templates select="@BASE_DEVICE"/></TD>
      </TR>
      <TR><TD>
        <DIV STYLE="media=print;font-family:Tahoma,Arial,sans-
serif;
font-size:12pt; color:black;
text-align:center; letter-spacing:6px;
font-weight:bold">
          <xsl:value-of
select="@CONFIG_SAVE_DATE"/>
        </DIV>
      </TD>
    </xsl:for-each>
  </TABLE>
  </TD>
</TR>
</TABLE>
</BODY>
</HTML>
```

FIGURE 4A

028270-006650

```
</TD></TR>
  </xsl:for-each>
</TABLE></TD>
</TR>
</TABLE>
<TABLE BORDER="1" CELLSPACING="0" WIDTH="640">
  <TR ALIGN="CENTER">
    <xsl:for-each select="//USER_MODULE_LIST/USER_MODULE">
      <TD><IMG>
        <xsl:attribute name="src">
          <xsl.value-of select="@NAME" />_icon.gif 41
        </xsl:attribute>
      </IMG></TD>
    </xsl:for-each>
  </TR>
</TABLE>
<P></P>
<TABLE BORDER="1" CELLSPACING="0" WIDTH="640">
  <DIV STYLE="media=print;font-family:Tahoma,Arial,sans-serif;
    font-size:12pt; color:blue;
    text-align:center; letter-spacing:6px;
    font-weight:bold">
    Signal Pin Table
  </DIV>
  <TR><TD WIDTH="320">
    <TABLE BORDER="1" CELLSPACING="0" ALIGN="CENTER">
      <TR ALIGN="CENTER">
        <TD>Pin#</TD>
        <TD>Label</TD>
        <TD>Select</TD>
        <TD>Drive</TD>
      </TR>
      <xsl:for-each select="//PIN_DESC_LIST/PIN_DESC">
        <TR ALIGN="CENTER">
          <TD><xsl:apply-templates
            select="@PIN_NUMBER"/></TD>
          <TD><xsl:apply-templates
            select="@PIN_LABEL"/></TD>
          <TD><xsl:apply-templates
            select="@PIN_SELECT"/></TD>
          <TD><xsl:apply-templates
            select="@PIN_DRIVE"/></TD>
        </TR>
      </xsl:for-each>
    </TABLE>
  </TD>
  <TD>
    <TABLE BORDER="0" CELLSPACING="0">
      <TR>
        <TD><IMG SRC="part.jpg"/></TD>
      </TR>
    </TABLE> 47
  </TD>
</TABLE>
```

FIGURE 4B

202207091550

```

serif;
        <DIV STYLE="media=print;font-family:Tahoma,Arial,sans-
        font-size:12pt; color:blue;
        text-align:center; letter-spacing:6px;
        font-weight:bold">
        Block
    </DIV>
</TD>
<TD>Type</TD>
<TD>Location</TD>
</TR>
<TR>
    <TD><xsl:apply-templates select="@NAME"/></TD>
    <TD><xsl:apply-templates select="@TYPE"/></TD>
    <TD><xsl:apply-templates select="@LOCATION"/></TD>
</TR>
<TR>
    STYLE="font-family:Tahoma,Arial,sans-serif;
    font-size:10pt; color:red;
    text-align:center; letter-spacing:3px;
    font-weight:bold">
    <TD>Registers</TD>
    <TD>Address</TD>
    <TD>Value</TD>
</TR>
<xsl:for-each select="REGISTER_LIST/REGISTER">
    <TR>
        <TD><xsl:apply-templates select="@NAME"/></TD>
        <TD><xsl:apply-templates select="@ADDR"/></TD>
        <TD><xsl:apply-templates select="@VALUE"/></TD>
    </TR>
</xsl:for-each>
<TR HEIGHT="10"/>
</xsl:for-each>
</xsl:for-each>
</TABLE>
</xsl:for-each>
<DIV CLASS="page">
    <BR/><BR/><BR/>
</DIV>
<TABLE BORDER="1" CELSPACING="0" WIDTH="640">
    <TR><TD>
        <TABLE BORDER="0" CELSPACING="0">
            <TR><TD><IMG SRC="cyp.jpg" ALIGN="LEFT"
WIDTH="350"/></TD></TR>
        </TABLE>
    </TD>
    <TD>
        <TABLE BORDER="0" CELSPACING="0" ALIGN="CENTER">
            <TR><TD>
                <DIV STYLE="media=print;font-family:Tahoma,Arial,sans-serif;

```

FIGURE 4E

```

font-size:16pt; color:blue;
text-align:center; letter-spacing:6px;
font-weight:bold">
Appendix
</DIV>
</TD></TR>
</TABLE>
</TD></TR>
</TABLE>
</P></P>
<TABLE BORDER="1" CELLSPACING="0" WIDTH="640">
  <DIV STYLE="media:print;font-family:Tahoma,Arial,sans-serif;
    font-size:12pt; color:blue;
    text-align:center; letter-spacing:6px;
    font-weight:bold">
    Pin
  </DIV>
  <TR>
    <TD>Name</TD>
    <TD>Value</TD>
  </TR>
  <xsl:for-each select="//RESERVED_RESOURCE_LIST/RESOURCE">
    <xsl:if match="RESOURCE[@TYPE='PIN']">
      <TR>
        <TD><xsl:apply-templates select="@NAME"/></TD>
        <TD><xsl:apply-templates select="@VALUE"/></TD>
      </TR>
    </xsl:if>
  </xsl:for-each>
</TABLE>
</P></P>
<TABLE BORDER="1" CELLSPACING="0" WIDTH="640">
  <DIV STYLE="media:print;font-family:Tahoma,Arial,sans-serif;
    font-size:12pt; color:blue;
    text-align:center; letter-spacing:6px;
    font-weight:bold">
    Analog Clocks
  </DIV>
  <TR><TD>Name</TD>
  <TD>Value</TD>
  </TR>
  <xsl:for-each select="//RESERVED_RESOURCE_LIST/RESOURCE">
    <xsl:if match="RESOURCE[@TYPE='ANALOG_CLOCK_SELECT']">
      <TR>
        <TD><xsl:apply-templates select="@NAME"/></TD>
        <TD><xsl:apply-templates select="@VALUE"/></TD>
      </TR>
    </xsl:if>
  </xsl:for-each>
  <xsl:for-each select="//RESERVED_RESOURCE_LIST/RESOURCE">
    <xsl:if match="RESOURCE[@TYPE='ANALOG_COLUMN_CLOCK_MUX']">

```

FIGURE 4F

2025 RELEASE UNDER E.O. 14176

```
<TR>
  <TD><xsl:apply-templates select="@NAME"/></TD>
  <TD><xsl:apply-templates select="@VALUE"/></TD>
</TR>
</xsl:if>
</xsl:for-each>
</TABLE>
<P></P>
<TABLE BORDER="1" CELLSPACING="0" WIDTH="640">
  <DIV STYLE="media=print;font-family:Tahoma,Arial,sans-serif;
    font-size:12pt; color:blue;
    text-align:center; letter-spacing:6px;
    font-weight:bold">
    Analog Input MUX
  </DIV>
  <TR>
    <TD>Name</TD>
    <TD>Value</TD>
  </TR>
  <TR>
    <xsl:for-each select="//RESERVED_RESOURCE_LIST/RESOURCE">
      <xsl:if match="RESOURCE[@TYPE='COLUMN_INPUT']">
        <TR>
          <TD><xsl:apply-templates select="@NAME"/></TD>
          <TD><xsl:apply-templates select="@VALUE"/></TD>
        </TR>
      </xsl:if>
    </xsl:for-each>
  </TABLE>
<P></P>
<TABLE BORDER="1" CELLSPACING="0" WIDTH="640">
  <DIV STYLE="media=print;font-family:Tahoma,Arial,sans-serif;
    font-size:12pt; color:blue;
    text-align:center; letter-spacing:6px;
    font-weight:bold">
    Analog Buffer Output
  </DIV>
  <TR>
    <TD>Name</TD>
    <TD>Value</TD>
  </TR>
  <TR>
    <xsl:for-each select="//RESERVED_RESOURCE_LIST/RESOURCE">
      <xsl:if match="RESOURCE[@TYPE='ANALOG_DRIVER']">
        <TR>
          <TD><xsl:apply-templates select="@NAME"/></TD>
          <TD><xsl:apply-templates select="@VALUE"/></TD>
        </TR>
      </xsl:if>
    </xsl:for-each>
  </TABLE>
<P></P>
<TABLE BORDER="1" CELLSPACING="0" WIDTH="640">
```

FIGURE 4G

```

<DIV STYLE="media=print;font-family:Tahoma,Arial,sans-serif;
font-size:12pt;color:blue;
text-align:center;letter-spacing:6px;
font-weight:bold">
Global Register Values
</DIV>
<TR>
<TD>Name</TD>
<TD>Address</TD>
<TD>Value</TD>
</TR>
<xsl:for-each select="//GLOBAL_REGISTER_LIST/REGISTER">
<TR>
<TD><xsl:apply-templates select="@NAME"/></TD>
<TD><xsl:apply-templates select="@ADDR"/></TD>
<TD><xsl:apply-templates select="@VALUE"/></TD>
</TR>
</xsl:for-each>
</TABLE>
</BODY> </HTML>
</xsl:template>

<xsl:template match="@NAME">
<B><xsl:value-of /></B>
</xsl:template>

<xsl:template match="@VALUE">
<xsl:value-of />
</xsl:template>

<xsl:template match="@INSTANCE_NAME">
<B><xsl:value-of /></B>
</xsl:template>

<xsl:template match="@SOURCE_GEN_TME">
<xsl:value-of />
</xsl:template>

<xsl:template match="@BASE_DEVICE">
<DIV STYLE="media=print;font-family:Tahoma,Arial,sans-serif;
font-size:12pt;color:blue;
text-align:center;letter-spacing:6px;
font-weight:bold">
<xsl:value-of />
</DIV>
</xsl:template>

<xsl:template match="@TYPE">
<xsl:value-of />
</xsl:template>

```

FIGURE 4H

```
<xsl:template match="@LOCATION">
  <xsl:value-of />
</xsl:template>

<xsl:template match="@REGISTER_NAME">
  <B><xsl:value-of /></B>
</xsl:template>

<xsl:template match="@REGISTER_VALUE">
  <xsl:value-of />
</xsl:template>

<xsl:template match="@ADDR">
  <xsl:value-of />
</xsl:template>

<xsl:template match="@PIN_NUMBER">
  <xsl:value-of />
</xsl:template>

<xsl:template match="@PIN_LABEL">
  <xsl:value-of />
</xsl:template>

<xsl:template match="@PIN_SELECT">
  <xsl:value-of />
</xsl:template>


<xsl:template match="@PIN_DRIVE">
  <xsl:value-of />
</xsl:template>

</xsl:stylesheet>
```

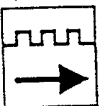
FIGURE 4I

PSoC Designer Configuration Sheet

501 patent 8 pin 2
CY8C25122-24PI
Fri Nov 02 10:55:40 2001



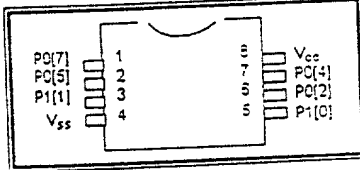
500
CYPRESS MICROSYSTEMS

502 

503 - Signal Pin Table

Pin#	Label	Select	Drive
1	PO[7]	StdCPU	Pull Down
2	PO[5]	StdCPU	Pull Down
3	PI[1]	Global OUT 1 (Strong)	Strong
4	VSS		
5	PI[0]	StdCPU	Pull Down
6	PO[2]	Global IN 2	High Z
7	PO[4]	StdCPU	Pull Down
8	VCC		

25122 PDIP / 504

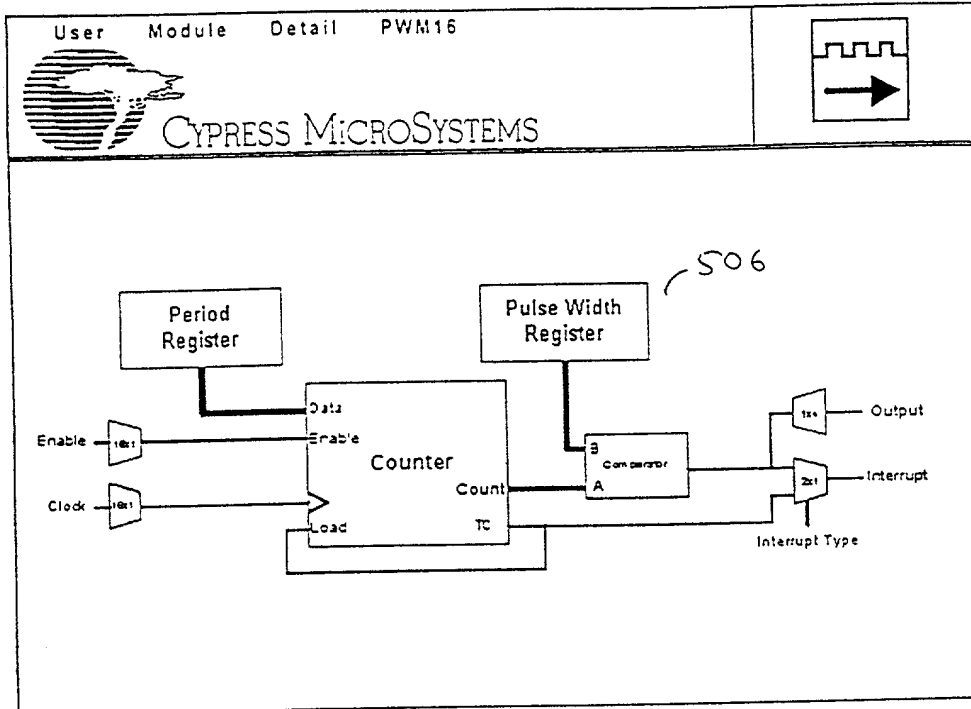


505 - Selected Global Parameters

Name	Value
24V1= 24MHz/N	5
24V2= 24V1/N	1
32K_Select	Internal
A_Buff_Power	Low
Analog Power	SC On/Ref Low
CPU_Clock	12_MHz
Op-Amp Bias	Low
PLL_Mode	Disable
Ref Mux	(Vcc/2)+/-BandGap
Sleep_Timer	512_Hz
SwitchModePump	OFF
VoltMonRange	5.0V
VoltMonThreshold	80%

FIGURE 5A

20080101 005455



507 - parameters

Parameters	Value
Clock	24V2
CompareType	Compare Less Than Or Equal
Enable	Global_IN_2
InterruptType	Terminal Count
Output	Global_OUT_1
Period	134
PulseWidth	92

FIGURE 5B

00000000000000000000000000000000

8-Blocks

Block	Type	Location
PWM16_LSB	DIGITAL	0
Registers		
	Address	Value
CONTROL_0	23	0
DATA_0	20	0
DATA_1	21	36
DATA_2	22	5c
DIG_BasicFunction	120	1
DIG_Input	121	e6
DIG_Output	122	0
Block		
	Type	Location
PWM16_MSB	DIGITAL	1
Registers		
	Address	Value
CONTROL_0	27	0
DATA_0	24	0
DATA_1	25	0
DATA_2	26	0
DIG_BasicFunction	124	21
DIG_Input	125	36
DIG_Output	126	5

FIGURE 5C



SOA Pin

Name	Value
Port_0_2	Global_IN_2
Port_0_2_Drive	High Z
Port_0_4	StdCPU
Port_0_4_Drive	Pull Down
Port_0_5	StdCPU
Port_0_5_Drive	Pull Down
Port_0_7	StdCPU
Port_0_7_Drive	Pull Down
Port_1_0	StdCPU
Port_1_0_Drive	Pull Down
Port_1_1	Global_OUT_1 (Strong)
Port_1_1_Drive	Strong

SIO Analog Clocks

Name	Value
AnalogClock_0_Select	
AnalogClock_1_Select	
AnalogColumn_Clock_0	24V1
AnalogColumn_Clock_1	24V1
AnalogColumn_Clock_2	24V1
AnalogColumn_Clock_3	24V1

SII Analog Input MUX

Name	Value
AnalogColumn_InputMUX_0	Port_0_1
AnalogColumn_InputMUX_1	Port_0_4
AnalogColumn_InputMUX_2	Port_0_5
AnalogColumn_InputMUX_3	Port_0_0

FIGURE 5D

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512-Analog Buffer Output

Name	Value
AnalogOutBuf_0	OFF
AnalogOutBuf_1	OFF
AnalogOutBuf_2	OFF
AnalogOutBuf_3	OFF

513-Global Register Values

Name	Address	Value
AnalogClockSelect	161	0
AnalogColumnClockSelect	160	0
AnalogColumnInputSelect	60	28
AnalogIOControl	162	0
AnalogModulatorControl	163	0
AnalogReferenceControl	63	5
AnalogSyncControl	65	0
DecimatorControl	e6	0
OscillatorControl_1	1e1	40
Port_0_Bypass	2	1
Port_0_DriveMode_0	100	0
Port_0_DriveMode_1	101	1
Port_1_Bypass	6	2
Port_1_DriveMode_0	104	2
Port_1_DriveMode_1	105	0
Port_2_Bypass	a	0
Port_2_DriveMode_0	108	0
Port_2_DriveMode_1	109	0
Port_3_Bypass	e	0
Port_3_DriveMode_0	10c	0
Port_3_DriveMode_1	10d	0
Port_4_Bypass	12	0
Port_4_DriveMode_0	110	0
Port_4_DriveMode_1	111	0
Port_5_Bypass	16	0
Port_5_DriveMode_0	114	0
Port_5_DriveMode_1	115	0
VoltageMonitorControl	1e3	34

FIGURE 5E

202210-005455